

TECH CENTER 1600/2900

NOV 09 2001

1653 RECEIVED

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/489,667B

DATE: 10/15/2001

TIME: 13:21:38

Input Set : A:\D2875.ST25.txt

Output Set: N:\CRF3\10152001\I489667B.raw

ENTERED

3 <110> APPLICANT: Donovan, Stephen
 5 <120> TITLE OF INVENTION: Clostridial Toxin Derivatives and Methods for Treating Pain
 7 <130> FILE REFERENCE: D-2875
 9 <140> CURRENT APPLICATION NUMBER: US 09/489,667B
 10 <141> CURRENT FILING DATE: 2000-01-19
 12 <160> NUMBER OF SEQ ID NOS: 18
 14 <170> SOFTWARE: PatentIn version 3.1
 16 <210> SEQ ID NO: 1
 17 <211> LENGTH: 11
 18 <212> TYPE: PRT
 19 <213> ORGANISM: Unknown
 21 <220> FEATURE:
 22 <223> OTHER INFORMATION: Description of Unknown Organism: This is a substance P and is
 ve
 23 ry well known in the art.
 25 <220> FEATURE:
 26 <221> NAME/KEY: MISC FEATURE
 27 <222> LOCATION: (11)...(11)
 28 <223> OTHER INFORMATION: Xaa at position 11 is Methionine Amide
 31 <400> SEQUENCE: 1
 W--> 33 Arg Pro Lys Pro Gln Gln Phe Phe Gly Leu Xaa
 34 1 5 10
 37 <210> SEQ ID NO: 2
 38 <211> LENGTH: 12
 39 <212> TYPE: PRT
 40 <213> ORGANISM: Unknown
 42 <220> FEATURE:
 43 <223> OTHER INFORMATION: Description of Unknown Organism: Precursor to substance P,
 which
 44 is very well known in the art.
 46 <400> SEQUENCE: 2
 48 Arg Pro Lys Pro Gln Gln Phe Phe Gly Leu Met Gly
 49 1 5 10
 52 <210> SEQ ID NO: 3
 53 <211> LENGTH: 13
 54 <212> TYPE: PRT
 55 <213> ORGANISM: Unknown
 57 <220> FEATURE:
 58 <223> OTHER INFORMATION: Description of Unknown Organism: This is a precursor to
 substanc
 59 e P and is very well known in the art.
 61 <400> SEQUENCE: 3
 63 Arg Pro Lys Pro Gln Gln Phe Phe Gly Leu Met Gly Lys
 64 1 5 10
 67 <210> SEQ ID NO: 4
 68 <211> LENGTH: 14
 69 <212> TYPE: PRT
 70 <213> ORGANISM: Unknown

72 <220> FEATURE:

73 <223> OTHER INFORMATION: Description of Unknown Organism: This is a precursor to
substanc

RAW SEQUENCE LISTING

DATE: 10/15/2001

PATENT APPLICATION: US/09/489,667B

TIME: 13:21:38

Input Set : A:\D2875.ST25.txt

Output Set: N:\CRF3\10152001\I489667B.raw

```

74      e P and is very well known in the art.
76 <400> SEQUENCE: 4
78 Arg Pro Lys Pro Gln Gln Phe Phe Gly Leu Met Gly Lys Arg
79 1          5          10
82 <210> SEQ ID NO: 5
83 <211> LENGTH: 12
84 <212> TYPE: PRT
85 <213> ORGANISM: Artificial Sequence
87 <220> FEATURE:
88 <223> OTHER INFORMATION: Description of Artificial Sequence: This is a carboxy-ester
synt
89      hetic precursor to substance P.
91 <220> FEATURE:
92 <221> NAME/KEY: MISC_FEATURE
93 <222> LOCATION: (12)..(12)
94 <223> OTHER INFORMATION: Xaa at position 12 is Glycine Methyl Ester
97 <400> SEQUENCE: 5
W--> 99 Arg Pro Lys Pro Gln Gln Phe Phe Gly Leu Met Xaa
100 1          5          10
103 <210> SEQ ID NO: 6
104 <211> LENGTH: 13
105 <212> TYPE: PRT
106 <213> ORGANISM: Artificial Sequence
108 <220> FEATURE:
109 <223> OTHER INFORMATION: Description of Artificial Sequence: This is a carboxy-ester
synt
110      hetic precursor to substance P.
112 <220> FEATURE:
113 <221> NAME/KEY: MISC_FEATURE
114 <222> LOCATION: (13)..(13)
115 <223> OTHER INFORMATION: Xaa at position 13 is Lysine Methyl Ester
118 <400> SEQUENCE: 6
W--> 120 Arg Pro Lys Pro Gln Gln Phe Phe Gly Leu Met Gly Xaa
121 1          5          10
124 <210> SEQ ID NO: 7
125 <211> LENGTH: 14
126 <212> TYPE: PRT
127 <213> ORGANISM: Artificial Sequence
129 <220> FEATURE:
130 <223> OTHER INFORMATION: Description of Artificial Sequence: This is a carboxy-ester
synt
131      hetic precursor to substance P.
133 <220> FEATURE:
134 <221> NAME/KEY: MISC_FEATURE
135 <222> LOCATION: (14)..(14)
136 <223> OTHER INFORMATION: Xaa at position 14 is Arginine Methyl Ester
139 <400> SEQUENCE: 7
W--> 141 Arg Pro Lys Pro Gln Gln Phe Phe Gly Leu Met Gly Lys Xaa
142 1          5          10
145 <210> SEQ ID NO: 8
146 <211> LENGTH: 12
147 <212> TYPE: PRT

```

RAW SEQUENCE LISTING

DATE: 10/15/2001

PATENT APPLICATION: US/09/489,667B

TIME: 13:21:38

Input Set : A:\D2875.ST25.txt

Output Set: N:\CRF3\10152001\I489667B.raw

```

148 <213> ORGANISM: Artificial Sequence ✓
150 <220> FEATURE:
151 <223> OTHER INFORMATION: Description of Artificial Sequence: This is a carboxy-ester ✓
synt
152      hetic precursor to substance P.
154 <220> FEATURE:
155 <221> NAME/KEY: MISC_FEATURE
156 <222> LOCATION: (12)..(12)
157 <223> OTHER INFORMATION: Xaa at position 12 is Glycine Ethyl Ester
160 <400> SEQUENCE: 8
W--> 162 Arg Pro Lys Pro Gln Gln Phe Phe Gly Leu Met Xaa
163 1          5          10
166 <210> SEQ ID NO: 9
167 <211> LENGTH: 13
168 <212> TYPE: PRT
169 <213> ORGANISM: Artificial Sequence ✓
171 <220> FEATURE:
172 <223> OTHER INFORMATION: Description of Artificial Sequence: This is a carboxy-ester ✓
synt
173      hetic precursor to substance P.
175 <220> FEATURE:
176 <221> NAME/KEY: MISC_FEATURE
177 <222> LOCATION: (13)..(13)
178 <223> OTHER INFORMATION: Xaa at position 13 is Lysine Ethyl Ester
181 <400> SEQUENCE: 9
W--> 183 Arg Pro Lys Pro Gln Gln Phe Phe Gly Leu Met Gly Xaa
184 1          5          10
187 <210> SEQ ID NO: 10
188 <211> LENGTH: 14
189 <212> TYPE: PRT
190 <213> ORGANISM: Artificial Sequence ✓
192 <220> FEATURE:
193 <223> OTHER INFORMATION: Description of Artificial Sequence: This is a carboxy-ester ✓
synt
194      hetic precursor to substance P.
196 <220> FEATURE:
197 <221> NAME/KEY: MISC_FEATURE
198 <222> LOCATION: (14)..(14)
199 <223> OTHER INFORMATION: Xaa at position 14 is Arginine Ethyl Ester
202 <400> SEQUENCE: 10
W--> 204 Arg Pro Lys Pro Gln Gln Phe Phe Gly Leu Met Gly Lys Xaa
205 1          5          10
208 <210> SEQ ID NO: 11
209 <211> LENGTH: 4
210 <212> TYPE: PRT
211 <213> ORGANISM: Unknown ✓
213 <220> FEATURE:
214 <223> OTHER INFORMATION: Description of Unknown Organism: This is a naturally
occurring am
215      ino thermal peptide fragment derived from substance P.
217 <400> SEQUENCE: 11
219 Arg Pro Lys Pro
220 1

```

RAW SEQUENCE LISTING

DATE: 10/15/2001

PATENT APPLICATION: US/09/489,667B

TIME: 13:21:39

Input Set : A:\D2875.ST25.txt

Output Set: N:\CRF3\10152001\I489667B.raw

223 <210> SEQ ID NO: 12
 224 <211> LENGTH: 7
 225 <212> TYPE: PRT
 226 <213> ORGANISM: Unknown
 228 <220> FEATURE:
 229 <223> OTHER INFORMATION: Description of Unknown Organism: This is a naturally
 occurring am
 230 ino acid thermal peptide fragment derived from substance P.
 232 <400> SEQUENCE: 12
 234 Arg Pro Lys Pro Gln Gln Phe
 235 1 5
 238 <210> SEQ ID NO: 13
 239 <211> LENGTH: 9
 240 <212> TYPE: PRT
 241 <213> ORGANISM: Unknown
 243 <220> FEATURE:
 244 <223> OTHER INFORMATION: Description of Unknown Organism: This is a naturally
 occurring am
 245 ino thermal peptide fragment derived from substance P.
 247 <400> SEQUENCE: 13
 249 Arg Pro Lys Pro Gln Gln Phe Phe Gly
 250 1 5
 253 <210> SEQ ID NO: 14
 254 <211> LENGTH: 11
 255 <212> TYPE: PRT
 256 <213> ORGANISM: Artificial Sequence
 258 <220> FEATURE:
 259 <223> OTHER INFORMATION: Description of Artificial Sequence: This is an analog of
 substan
 260 ce P.
 262 <220> FEATURE:
 263 <221> NAME/KEY: MISC_FEATURE
 264 <222> LOCATION: (2)..(11)
 265 <223> OTHER INFORMATION: Xaa at position 2 is D-form of Proline, Xaa at position 7 is
 D-fo
 266 rm of Phenylalanine, Xaa at position 9 is D-form of Tryptophan, X
 267 aa at position 11 Methionine Amide
 270 <400> SEQUENCE: 14
 W--> 272 Arg Xaa Lys Pro Gln Gln Xaa Phe Xaa Leu Xaa
 273 1 5 10
 276 <210> SEQ ID NO: 15
 277 <211> LENGTH: 12
 278 <212> TYPE: PRT
 279 <213> ORGANISM: Artificial Sequence
 281 <220> FEATURE:
 282 <223> OTHER INFORMATION: Description of Artificial Sequence: This is an analog of
 substan
 283 ce P.
 285 <220> FEATURE:
 286 <221> NAME/KEY: MISC_FEATURE
 287 <222> LOCATION: (2)..(9)
 288 <223> OTHER INFORMATION: Xaa at positon 2 is D-form of Proline, Xaa at position 7 is
 D-for

289 m of Phenylalanine, Xaa at position 9 is D-form of Tryptophan
292 <400> SEQUENCE: 15

RAW SEQUENCE LISTING

DATE: 10/15/2001

PATENT APPLICATION: US/09/489,667B

TIME: 13:21:39

Input Set : A:\D2875.ST25.txt

Output Set: N:\CRF3\10152001\I489667B.raw

W--> 294 Arg Xaa Lys Pro Gln Gln Xaa Phe Xaa Leu Met Gly
 295 1 5 10
 298 <210> SEQ ID NO: 16
 299 <211> LENGTH: 11
 300 <212> TYPE: PRT
 301 <213> ORGANISM: Artificial Sequence
 303 <220> FEATURE:
 304 <223> OTHER INFORMATION: Description of Artificial Sequence: This is an analog of
 substan
 305 ce P.
 307 <220> FEATURE:
 308 <221> NAME/KEY: MISC_FEATURE
 309 <222> LOCATION: (2)..(11)
 310 <223> OTHER INFORMATION: Xaa at position 2 is D-form of Proline, Xaa at position 7 is
 D-fo
 311 rm of Tryptophan, Xaa at position 9 is D-form of Tryptophan, Xaa
 312 at position 11 is Methionine Amide
 315 <400> SEQUENCE: 16
 W--> 317 Arg Xaa Lys Pro Gln Gln Xaa Phe Xaa Leu Xaa
 318 1 5 10
 321 <210> SEQ ID NO: 17
 322 <211> LENGTH: 12
 323 <212> TYPE: PRT
 324 <213> ORGANISM: Artificial Sequence
 326 <220> FEATURE:
 327 <223> OTHER INFORMATION: Description of Artificial Sequence: This is an analog of
 substan
 328 ce P.
 330 <220> FEATURE:
 331 <221> NAME/KEY: MISC_FEATURE
 332 <222> LOCATION: (2)..(9)
 333 <223> OTHER INFORMATION: Xaa at position 2 is D-form of Proline, Xaa at position 7 is
 D-fo
 334 rm of Tryptophan, Xaa at position 9 is D-form of Tryptophan
 337 <400> SEQUENCE: 17
 W--> 339 Arg Xaa Lys Pro Gln Gln Xaa Phe Xaa Leu Met Gly
 340 1 5 10
 343 <210> SEQ ID NO: 18
 344 <211> LENGTH: 11
 345 <212> TYPE: PRT
 346 <213> ORGANISM: Artificial Sequence
 348 <220> FEATURE:
 349 <223> OTHER INFORMATION: Description of Artificial Sequence: This is an analog of
 substan
 350 ce P.
 352 <220> FEATURE:
 353 <221> NAME/KEY: MISC_FEATURE
 354 <222> LOCATION: (11)..(11)
 355 <223> OTHER INFORMATION: Xaa at position 11 is Methionine Amide
 358 <400> SEQUENCE: 18
 W--> 360 Arg Pro Cys Pro Gln Cys Phe Tyr Gly Pro Xaa
 361 1 5 10

VERIFICATION SUMMARY

DATE: 10/15/2001

PATENT APPLICATION: US/09/489,667B

TIME: 13:21:40

Input Set : A:\D2875.ST25.txt

Output Set: N:\CRF3\10152001\I489667B.raw

L:33 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1
L:99 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5
L:120 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6
L:141 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7
L:162 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8
L:183 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9
L:204 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10
L:272 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14
L:294 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15
L:317 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:16
L:339 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17
L:360 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:18